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U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

I. HEADING

DATE: October 10, 2002

SUBJECT: Commerce Road Mercury Spill, Milford, Oakland County, MI

FROM: Jon Gulch, OSC, U.S. EPA, Region 5, ERB, Grosse Ile, MI
Mark Durno, OSC, U.S. EPA, Region 5, ERB, Westlake, OH

TO: R. Worley, U.S. EPA, OSWER, Washington, DC. (worley.ray@epa.gov)
R. Karl, Chief, U.S. EPA, ERB, Chicago, IL (karl.rick@epa.gov)
J. El-Zein, Section Chief, U.S. EPA, RS1, Grosse Ile, MI (el-zein.jason@epa.gov)
W. Messenger, Chief, U.S. EPA, ERB, Chicago, IL (messenger.william@epa.gov)
H. Bogda-Cleveland, U.S. EPA, ORC, Chicago, IL (bogda.hedi@epa.gov)
C. Ropski, U.S. EPA, ESS, Chicago, IL (ropski.carol@epa.gov)
A. Marouf, U.S. EPA, H&S, Chicago, IL (marouf.afif@epa.gov)
M. Hans, U.S. EPA, OPA, Chicago, IL (hans.mick@epa.gov)
S. Hill, U.S. EPA, OPA, Chicago, IL (hill.stuart@epa.gov)
G. Carpenter, MDEQ, Lansing, MI (carpentg@state.mi.us)
B. Boyle, MDCH, Lansing, MI (boyleb@state.mi.us)
D. Lince, MDCH, Lansing, MI (lince@mdch.state.mi.us)
G. Frick, OCHD, Oakland County, MI (frickg@co.oakland.mi.us)
Duty Officer, NRC, Washington, DC (fldr-uscg@comdt.uscg.mil)
J. Maritote, U.S. EPA, ERB, Chicago, IL (maritote.john@epa.gov)
T. Johnson, U.S. EPA, Grosse Ile, MI (johnson.tracy@epa.gov)

Polrep #2: CERCLA Emergency Response

II. BACKGROUND

Site ID No.:	B54R
Delivery Order Number:	FHI Task Order# 89
Response Authority:	CERCLA
NPL Status:	Not on NPL
State Notification:	Referral from MDCH
Latitude/Longitude:	42°35'30.30" North / 83° 35'47.87" West
Start Date:	September 11, 2002

III. SITE INFORMATION

A. Incident Category

Emergency Response – Elemental Mercury Spill

B. Site Description

See POLREP #1 for more detailed site information

IV. RESPONSE INFORMATION

A. Situation

1. **Current situation:**

The United States Environmental Protection Agency (U.S. EPA), the Tetra Tech EM Inc. Superfund Technical Assistance and Response Team (START) and Ferguson Harbor, Inc., the Emergency and Rapid Response Services (ERRS) contractor re-mobilized to the site on October 3, 2002 to conduct additional cleanup activities after mercury vapor concentrations increased from levels slightly above the cleanup goal to between 5 to 12 times the clean up goal of $1\mu\text{g}/\text{m}^3$. Currently, the house has been re-occupied and mercury vapor levels within the house are less than $1\mu\text{g}/\text{m}^3$. START will re-screen the residence to verify that the levels remain below the cleanup goal.

2. **Site activities to date:**

On September 17, 2002, START returned to the site to screen the residence for the presence of mercury vapor. START screened the house for the presence of mercury vapor using a Lumex RA 915+ portable mercury vapor analyzer. Screening was conducted after the house had been heated and ventilated for 24 hours. Mercury vapor concentrations in the breathing zone throughout the house ranged from 0.1 to $0.5\mu\text{g}/\text{m}^3$. Following screening, ventilation was stopped and the house secured and stabilized.

On September 27, 2002 START returned to the residence, terminated ventilation and secured the windows and allowed the house to stabilize. On October 1, 2002 the house was re-screened using the Lumex. Mercury vapor concentrations within the breathing zone of the house ranged from 5 to $12\mu\text{g}/\text{m}^3$. Ventilation of the house was re-established.

On October 2, 2002, START returned to the house and conducted a through screening of each room to identify all possible sources for the mercury vapor. Results of the screening indicated that the carpeting in the upstairs portion of the house and sun-room exhibited mercury vapor concentrations as high as $48\mu\text{g}/\text{m}^3$. Readings from the breathing zone in the basement ranged from 2.5 to $41\mu\text{g}/\text{m}^3$; $48\mu\text{g}/\text{m}^3$ from the clock; 3 to $18\mu\text{g}/\text{m}^3$ from the floor of the laundry room and as high as $49\mu\text{g}/\text{m}^3$ from the basement hallway. Isolated areas in the den (original spill location) exhibited readings as high as $6\mu\text{g}/\text{m}^3$.

On October 3, 2002 U.S. EPA, START and ERRS mobilized to the site and commenced clean up activities. Cleanup activities included removal and disposal of the linoleum floor, underlying sub-floor, washer, and false wall from the laundry

room. Removal of the carpeting from the sun room, carpet padding from the basement stairs, the clock from the basement. Personal items located in the basement and garage including boxes and a refrigerator were screened for the presence of mercury vapor. Items that were not contaminated were placed into a temporary storage unit secured by ERRS. Once items in the rooms were removed, floors were vacuumed using a mercury vacuum and washed with HgX a mercury binding solution. Cleanup continued on October 4th and included the removal and disposal of items from the laundry room (coffee maker, cups, wash tub and drain etc), re-washing of the floors with HgX, vacuuming of a portion of the garage floor using a mercury vacuum and washing the garage floor using HgX. The homeowner requested that moving of her personal items be conducted by professional movers. However, due to the time-frame and presence of mercury, a moving company could not be secured. Therefore, the homeowner agreed to move the items over the weekend and ERRS de-mobilized from the site.

On October 5, 2002 the homeowner arranged for small items located on the upstairs floor to be boxed and moved. START screened the exterior of boxes and soft items for the presence of mercury vapor. One chair, a love seat and one couch (which had been shrink-wrapped by the homeowner prior to the spill), exhibited mercury vapor concentrations as high as $17 \mu\text{g}/\text{m}^3$. The items were unwrapped and placed on plastic in the garage and allowed to ventilate.

On October 7, 2002, U.S. EPA, ERRS, and START returned to the site to complete cleanup activities. Cleanup activities for the upstairs and Den included removal of carpeting in the upstairs and vacuuming of the floors using a mercury vacuum. The laundry room floor and hallway were re-washed with HgX and ventilation and heating of the house was established.

On October 8, 2002 START returned to the site to re-screen the house. Mercury vapor concentrations in breathing zones in the house ranged from 0.2 to $0.3 \mu\text{g}/\text{m}^3$. Several bags of moving blankets (obtained and used by the homeowner during moving activities) were screened. Two of the bags had to be disposed due to the presence of high levels of mercury.

On October 9, START returned to the site in the morning and secured the windows in the house and set the temperature at 73° . START returned to the site after allowing the house for stabilize for six hours. Readings in the breathing zone of the house ranged from 0.4 to $0.5 \text{ g}/\text{m}^3$. The highest reading from the laundry room was $1.8 \text{ g}/\text{m}^3$.

B. Planned Removal Activities

Disposal arrangements are currently underway for the mercury contaminated debris and water associated with the removal actions.

C. Next Steps

START will re-screen the house (at the request of the home-owner) again in approximately one month. All waste collected during the removal action will be transported to an U.S.

EPA-approved off-site facility for disposal.

D. Key Issues

Response to this spill was delayed. The Michigan Department of Community Health initially contacted U.S. EPA on September 9, 2002; however, it was unclear at that time whether or not the owner's insurance company would fund the response privately. The official referral to U.S. EPA was made on September 11, 2002. According to the home owner, the spill occurred the previous week.

Because the homeowners did not use their household vacuum to attempt to clean-up the spill, they significantly reduced the amount of clean-up that was required during this response.

V. COST INFORMATION

Estimated costs as of October 10, 2002:

U.S. EPA	\$ 8,300
START	\$ 5,700
ERRS	\$ 17,900

The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report is written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.